OPERATION MANUAL

OFFICE PRO W20

SERIAL NUMBER FROM FEBRUARY 2011 (0211) TO PRESENT

READ THIS MANUAL CAREFULLY FOR INSTRUCTIONS ON CORRECT INSTALLATION AND USAGE, AND READ ALL SAFEGUARDS

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SECTION EN FRANÇAIS
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MOVINCOOL®
THE #1 SPOT COOLING SOLUTION

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OPERATION MANUAL

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MOVINCOOL®

THE #1 SPOT COOLING SOLUTION

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FOREWORD

Congratulations on purchasing the MovinCool portable air conditioner. This manual explains how to install and operate the MovinCool Office Pro W20 portable air conditioning unit. Please read this operation manual thoroughly to familiarize yourself with the features of the unit and to ensure years of reliable operation.

You may also find it useful to keep this operation manual on hand for reference. Components and/or procedures are subject to change without prior notice.

Definition of Terms

⚠ **WARNING: Describes precautions that should be observed in order to prevent injury to the user during installation or unit operation.**

⚠ **CAUTION: Describes precautions that should be observed in order to prevent damage to the unit or its components, which may occur during installation or unit operation if sufficient care is not taken.**

Note: Provides additional information that facilitates installation or unit operation.

GENERAL WARNINGS & CAUTIONS

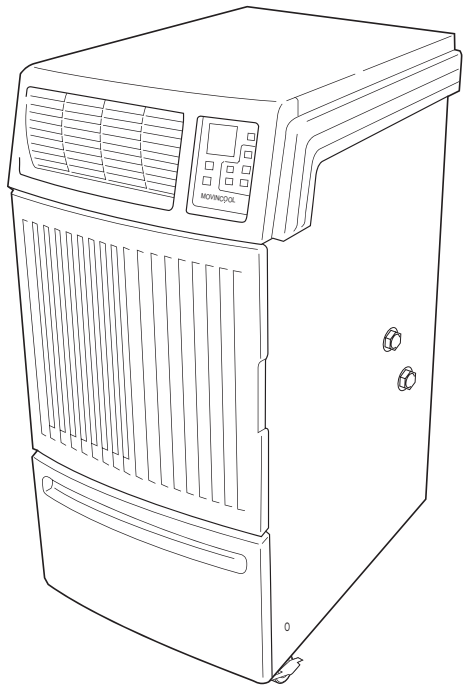
1. All electrical work should only be performed by qualified electrical personnel. Repair to electrical components by non-certified technicians may result in personal injury and/or damage to the unit. All electrical components replaced must be genuine MovinCool parts, purchased from an authorized reseller.
2. The power supply for this unit should be a dedicated single outlet circuit with UL recognized short-circuit and ground-fault protective breaker.
3. Because of potential safety hazards under a certain condition, we strongly recommend against the use of an extension cord.
   However, if you still elect to use an extension cord, it is absolutely necessary that it is a UL listed, 3-wire grounding type appliance extension cord, having a 3-blade and a 3-slot receptacle that plugs into the appliance.
   The marked rating of the extension cord should be 115 V, 15 A or equivalent.
4. This unit is equipped with a 10 feet (3 m) UL recognized LCDI power cord. For replacement, fixed location (hard wired) or power cord lengthening (extension cord) cords are required, contact your reseller or a qualified electrician for approved replacement methods.
5. Never fold or place heavy objects on the power cord.
   This could result in damage to the power cord causing electrical shock or fire.
6. Turn the unit off and disconnect the power when the power cord is damaged.
7. Do not place water or any other liquid on the unit. This can cause damage to the unit and increase the risk of electrical shock.
8. Do not sit or stand on the unit.
9. Do not operate the unit without water connection or without supplied water.
10. If the entering water temperature is below 68 °F (20 °C) or above 86 °F (30 °C), adjustment of the unit's water regulating valve setting is required (see page 29). Failure to adjust this valve may damage the unit and void the warranty. Contact a qualified technician for details.

INVENTORY

After unpacking your MovinCool unit, please check to make sure you have the following items:

1. **Office Pro W20 MovinCool Unit (1)**
2. **Operation Manual/Product Registration (1)**
3. **Garden Hose Adapter (2)**

Note: If any of these items were not included in the box or appear damaged, please contact your MovinCool reseller for replacement.



OFFICE PRO W20 UNIT

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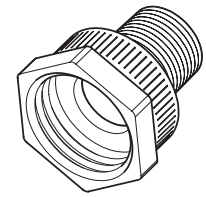

GARDEN HOSE ADAPTER

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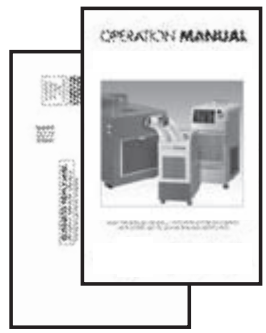

OPERATION MANUAL / PRODUCT REGISTRATION

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INSTALLATION

Choosing an Installation Site

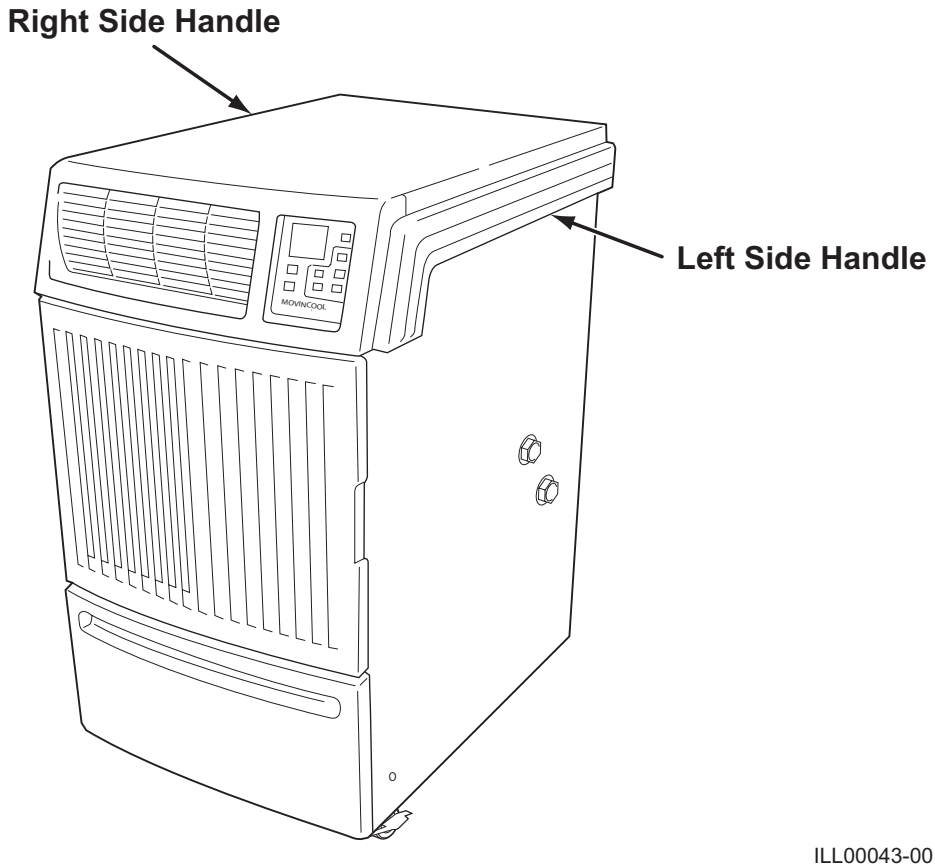
⚠ **CAUTION: Following are some precautions to consider before choosing your installation site. Please review carefully as improper installation may result in personal injury or damage to the unit.**

1. Do not use the unit in areas where leakage of flammable gas may occur.
2. Do not use the unit in areas where it is exposed to rain or water.
3. Do not use the unit in an environment which contains excessive amounts of corrosive gas or vapor.
4. Do not use in areas where the temperature is outside the allowable operating range.
5. Do not install the unit in sloping areas. The unit may move or topple over even if the casters are set to the LOCKED position.
6. Install the unit in areas that can with-stand the weight of the unit. The Office Pro W20 unit weighs approximately 220 lb (100 kg), when the drain tank is full of water.
7. Allow 18 inch of unobstructed airflow for both the air inlets and outlets.
8. Do not use the unit at condition above 95 °F (35 °C) 60 %RH.
9. Do not use the unit when the supplied water temperature is above 90 °F (32 °C).
10. Make sure that the supplied water source has the minimum flow rate of 4.8 gal/min (18 L/min) at 7 psi (50 kPa) or more.
11. Supply water pressure limitation is maximum 150 psi (1,034 kPa).
    When operating the unit with the water hoses, follow the lower water pressure limitation of the unit or the optional water hoses.
    If supply water pressure is exceeding the pressure limitation, a water pressure regulating valve must be installed in the water supply line before the unit or hose connections.
12. Do not use the unit with water which contains a high corrosive factor.

INSTALLATION (cont.)

Moving the Unit

Unlock the casters and push the MovinCool unit using the side handles to a flat, level surface and set the casters back to the LOCKED position.



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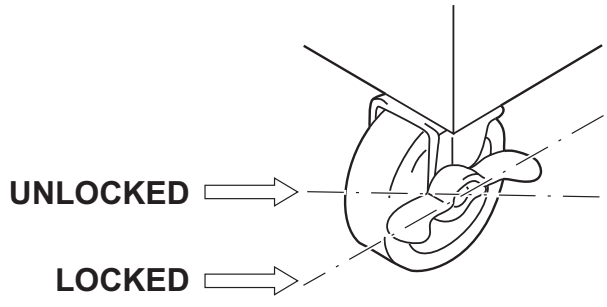

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INSTALLATION (cont.)

Water Pipe or Hose Connection

⚠ **WARNING: Before plugging in the unit, connect the water line to the unit. To avoid electrical shock, make sure that there is no water splashed onto the electrical box or the power cord.**

Office Pro W20 unit has two female 1/2 inch NPT (National Pipe Thread) connectors for water connections.

ITEM	CONNECTION TYPE		CONNECTOR HEAD SIZE
	FEMALE	MALE	
Office Pro W20 unit	1/2 in NPT	-	1 in
Supplied Garden Hose Adapter	GHT	1/2 in NPT	1-3/16 in, 7/8 in
Optional Water Hose	GHT	GHT	1-3/16 in, 1-3/32 in

Optional water hose kit with water pressure up to 150 psi (1,034 kPa) is available.

Connecting Water Pipes

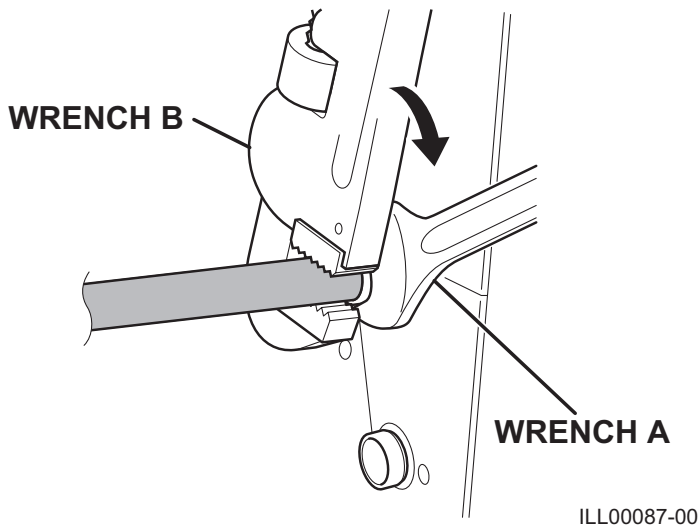
1. Remove the caps from the NPT connectors on the right side panel of the unit.

Note: Small residues of water may drip from the NPT connectors when the caps are first removed.

2. Connect the water pipes to the NPT connectors.

Note: The supplied garden hose adapters are not required.

⚠ **CAUTION: Use two proper sized wrenches. Hold the wrench A tightly so that the unit is not deformed. Apply a Teflon tape to the thread for a good seal.**



INSTALLATION (cont.)

Water Pipe or Hose Connection (cont.)

Connecting Water Pipes (cont.)

3. Make sure that water inlet of the unit and water supply line are connected, and there is no water leakage.

Note:

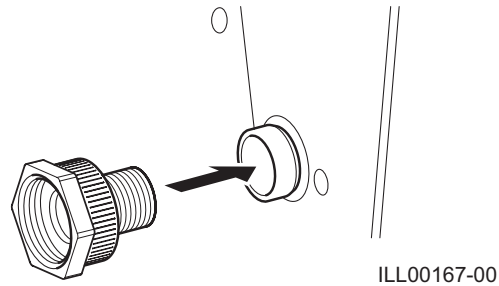
1. *Installing manual service shut-off valves at the water supply and return lines is strongly recommended. These valves are used for routine service, emergency isolation of the unit, or removal of the unit in off-season.*
2. *When supply water quality is poor, filters that can be easily serviced should be placed in the water supply line.*

Connecting Optional Water Hoses

1. Remove the caps from the NPT connectors on the right side panel of the unit.

Note: Small residues of water may drip from the NPT connectors when the caps are first removed.

2. Connect the supplied garden hose adapters to the NPT connectors.



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Note: Apply a Teflon tape to the thread for a good seal.

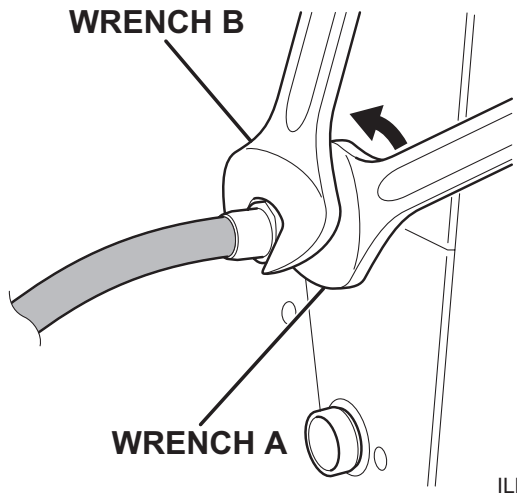
INSTALLATION (cont.)

Water Pipe or Hose Connection (cont.)

Connecting Optional Water Hoses (cont.)

3. Connect the optional water hoses to the garden hose adapters.

⚠ **CAUTION: Use two proper sized wrenches. Hold the hose-end connector with the wrench B tightly to prevent hose rotation. Then tighten the swivel nut with the wrench A.**



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4. Connect the other end of the garden hoses to the water source. Make sure that water inlet of the unit and water supply line are connected.
5. Make sure that there is no water leakage.

Note:

1. *Installing manual service shut-off valves at the water supply and return lines is strongly recommended. These valves are used for routine service, emergency isolation of the unit, or removal of the unit in off-season.*
2. *When supply water quality is poor, filters that can be easily serviced should be placed in the water supply line.*

INSTALLATION (cont.)

Plugging in the Unit

1. Check the prongs and surface of the power cord plug for dust/dirt. If dust and/or dirt are present, wipe off with a clean, dry cloth.
2. Check the power cord, plug and prongs for damage or excess play. If any damage or excess play is found, contact your MovinCool reseller or a qualified technician for repair.

⚠ **WARNING:**

1. **If the power cord or plug is damaged, replacement should only be performed by qualified electrical personnel.**
2. **Do not connect/disconnect the power cord or attempt to operate buttons with wet hands. This could result in electrical shock.**
3. **Because of potential safety hazards under a certain condition, we strongly recommend against the use of an extension cord. However, if you still elect to use an extension cord, it is absolutely necessary that it is a UL listed, 3-wire grounding type appliance extension cord, having a 3-blade and a 3-slot receptacle that plugs into the appliance. The marked rating of the extension cord should be 115 V, 15 A or equivalent.**

⚠ **CAUTION: The power supply should be a dedicated single outlet circuit with UL recognized short-circuit and ground-fault protective breaker. Do not share the AC outlet with any other instrument or equipment. The minimum power supply rating and the maximum fuse size is shown below.**

MINIMUM POWER SUPPLY RATING	RECOMMENDED FUSE SIZE
115 V, single phase, 60 Hz, 15 A	15 A maximum

Note:

1. *Make sure the AC outlet is free of dirt, dust, oil, water, or any other foreign matter.*
2. *The Office Pro W20 is equipped with UL recognized LCDI cord and NEMA plug configuration (5-15). The appropriate outlet must be used for this plug type.*

INSTALLATION (cont.)

Warning Signal Connection (Output Signal Terminal L+ and L-)

The controller is equipped with a warning signal output relay type (Form C, normal open dry contact) which can be used to monitor the failure conditions.

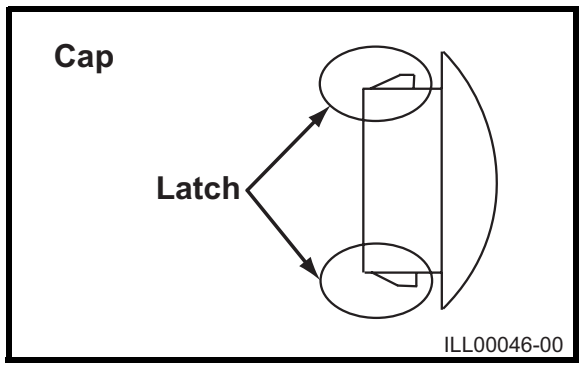
Relay contactor is closed when any of the following conditions has occurred:

a. Tank full
b. Temperature sensor fails
c. High pressure switch error

The relay output contactor is rated 2 A at 30 VDC or 2 A at 30 VAC (resistive load) and it is compatible with various warning devices such as alarm speaker, light indicators, etc.

Connecting Warning Signal From Controller

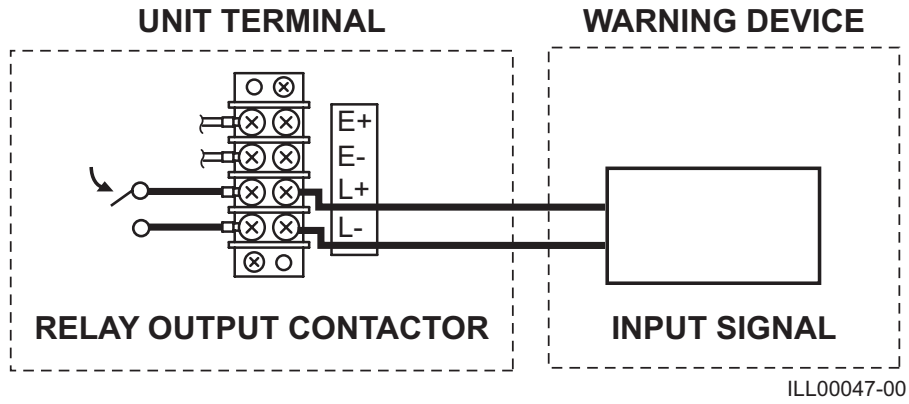
1. Remove service panel from the rear of the unit.
2. Squeeze the inner latches and push out the black cap from inside the panel.



3. Insert the warning signal wire through the hole in the rear panel.

Note: Use recommended warning signal wire size from 16 AWG to 26 AWG for a solid wire, or 16 AWG to 22 AWG for a stranded wire with ring terminal for #6 stud size.

4. Connect the warning device to terminal L+ and L- according to its polarities.



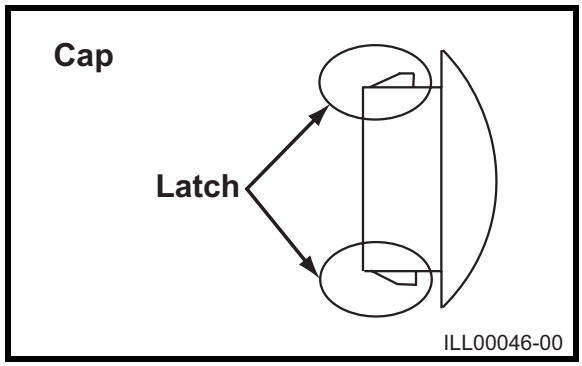
INSTALLATION (cont.)

Fire Alarm Control Panel Connection (Input Signal Terminal E+ and E-)

The controller is equipped with a normal open input signal connection, which can be connected directly from the fire alarm control panel. This input signal terminal should only be connected to a close or open dry contact signal. When receiving the signal from the fire alarm control panel, the unit turns off and does not turn back on until it has been RESET.

Connecting Fire Alarm Control Panel to Controller

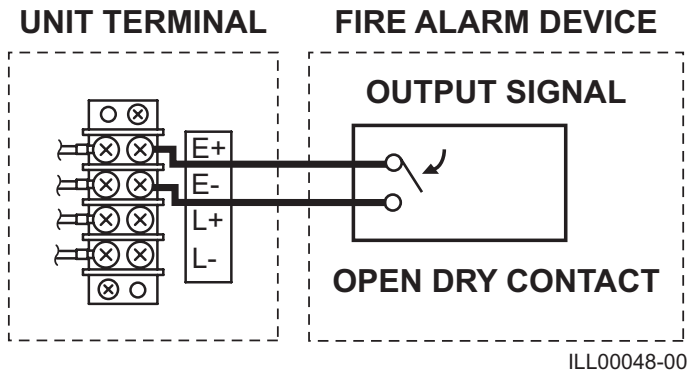
1. Remove service panel from the rear of the unit.
2. Squeeze the inner latches and push out the black cap from inside the panel.



3. Insert the fire alarm signal wire through the hole in the rear panel.

Note: Use recommended warning signal wire size from 16 AWG to 26 AWG for a solid wire, or 16 AWG to 22 AWG for a stranded wire with ring terminal for #6 stud size.

4. Connect the fire alarm device to terminal E+ and E- according to its polarities.



INSTALLATION (cont.)

LCDI Power Cord Instruction

⚠ **WARNING: The LCDI device is a non-serviceable device. Attempting to open the device may expose the user to the hazards of electric shock, and could void warranties of this product. Manufacturer's reliability is limited to the replacement of the device.**

⚠ **CAUTION:**

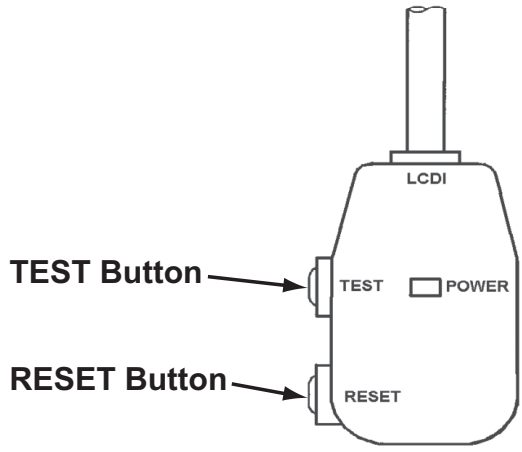
1. **Read the attention printed on the device for proper use and handling of this device.**
2. **This device is used for monitoring leakage current.**
3. **Do not immerse in water.**
4. **This device must only be plugged into an appropriate wall outlet. Do not use on extension cords or adapter. Do not remove ground prong.**
5. **In the event that this device trips, the cause of malfunction should be corrected first before further use.**
6. **Using the device beyond recommended voltage poses risk to users.**
7. **Conductors inside this cord are surrounded by shields, which monitor leakage current. These shields are not grounded, and they are periodically examined the cord for any damage. Do not use this product in the event the shields become exposed.**
8. **Do not repeatedly push the TEST and/or RESET buttons.**

Test Procedure

Test device once when AC is installed to assure proper operation.

1. Plug into grounded power receptacle.
2. If light is not on, press RESET button once. Light should turn on.
3. Press TEST button once, light must turn off.
4. Press RESET button once again for use. Light should turn on.
5. If test fails, do not use. Contact a qualified technician for details.

<FRONT VIEW>



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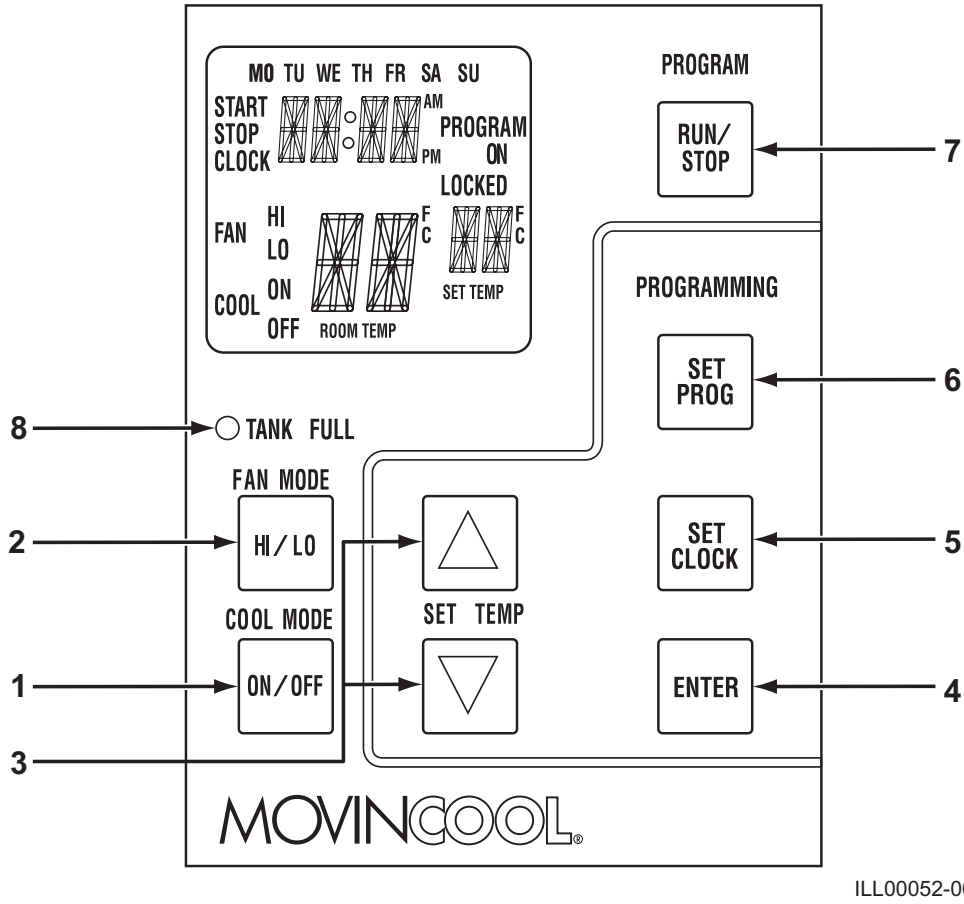
FEATURES

1. A digital electronic control panel, which allows the user to easily control the unit's operation.
2. Dual fan speeds (either HIGH or LOW) in both COOL and FAN ONLY modes.
3. Digital LCD display with blue backlight that indicates:
   a. Clock with day and time
   b. Room temperature and set point temperature (either Fahrenheit or Celsius)
   c. Fan speed status
   d. Cool mode status
   e. Program start time and stop time
   f. Program run and stop
   g. Status codes
   h. Keypad lock
4. The set point temperature can be adjusted between 65 °F (18 °C) and 90 °F (32 °C) by the SET TEMP buttons (△/▽).
5. Fire alarm control panel connection with automatic shut off.
6. Automatic shut off, warning signal output and alarm for temperature sensor failure, and conditions of self-diagnostic codes.
7. Condensate drain "TANK FULL" indicator (LED) and display (LCD).
8. Automatic restart feature when the power is lost and regained. The unit returns to the operating mode it was in prior to the loss of power. Any preset program is retained in the memory in the event power loss occurs.
9. Programmable operation control. This function allows the user to program automatic operation which includes time and day of unit start and/or stop, set temperature, and fan speed.

OPERATION

Control Panel

Before operating the unit, it is important to familiarize yourself with the basic controls located on the control panel.



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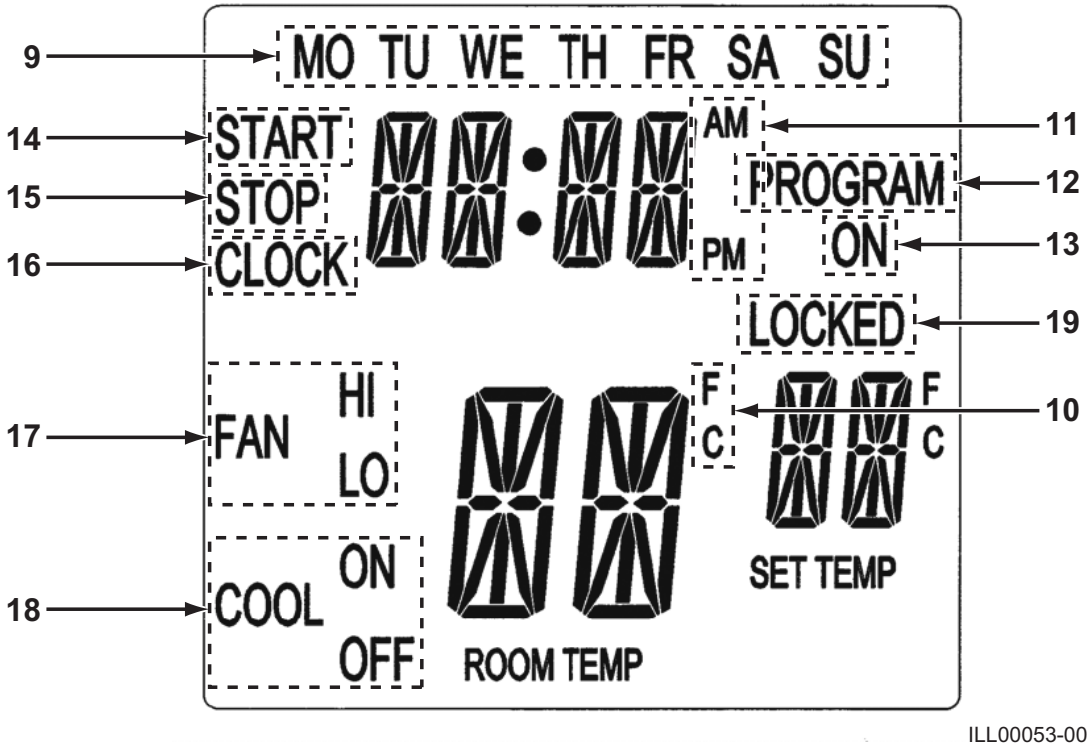
1.	**COOL Mode Button**	Activates/deactivates the COOL mode and turns the unit off.
2.	**FAN Mode Button**	Activates/deactivates the high, low, and off fan speed.
3.	**SET TEMP Buttons (△/▽)**	Temperature scale illuminates to indicate the current LED temperatures being displayed are either in °C or °F; also displays the clock when programming.
4.	**ENTER Button**	Press to select set value.
5.	**SET CLOCK Button**	Press to set clock (day and time).
6.	**SET PROG Button**	Press to set or view program.
7.	**RUN/STOP Button**	Activates/deactivates program(s).
8.	**TANK FULL LED**	Flashes when the drain tank is full.

OPERATION (cont.)

Control Panel (cont.)

LCD Indicators



9.	**MO...SU**	Illuminates to indicate selected day of the week.
10.	**°C or °F**	Temperature displayed in either Fahrenheit or Celsius (see Note).
11.	**AM/PM**	Illuminates to indicate AM or PM time of day.
12.	**PROGRAM**	Blinking during program editing mode.
13.	**PROGRAM ON**	Illuminates to indicate program is running.
14.	**START**	Illuminates to indicate program start time.
15.	**STOP**	Illuminates to indicate program stop time.
16.	**CLOCK**	Illuminates to indicate clock status.
17.	**FAN HI/LO**	Illuminates to indicate selected fan speed.
18.	**COOL ON/OFF**	Illuminates to indicate cool on or off.
19.	**LOCKED**	Illuminates to indicate keypad locked.

Note: ROOM TEMP display range is from 16 °F to 109 °F (-9 °C to 42 °C). When the display value is greater than 99 °F, it displays values of +0F (for 100 °F), +1F (for 101 °F) and +9F (for 109 °F). (This only applies to Farenheit values.)

OPERATION (cont.)

Operating Modes

The Office Pro W20 can be operated in two modes, FAN ONLY and COOL. When in FAN ONLY mode, the unit circulates the surrounding air. When in COOL mode, the compressor is operated and cool air is circulated.

1. **COOL Mode**
   Once the compressor has been disengaged for more than 120 seconds, the unit operates in FAN ONLY mode for approximately 5 seconds before the compressor re-engages.

2. **Temperature Control**
   The room temperature thermistor monitors the inlet temperature versus set point temperature and switches the unit automatically between COOL and FAN ONLY modes.

3. **Fan Mode Control DIP Switch**
   The fan mode control DIP switch determines whether the fan continues to operate or stop when the compressor cycles off. (Set point temperature below the inlet air or room temperature.) The unit has been preset at the factory for continuous fan operation.

   Note: If you want to change the fan mode operation (from OPERATE to STOP), contact your MovinCool reseller.

4. **Temperature Scale Display DIP Switch**
   The temperature scale display DIP switch changes the temperature(s) that are displayed to either °C or °F. The unit has been preset at the factory to display the temperature(s) in °F.

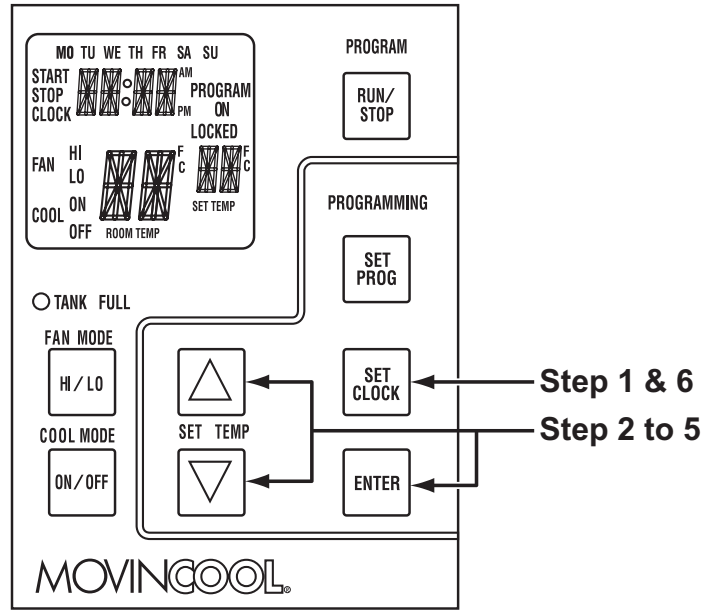
   Note: If you want to change the temperature scale display (°F to °C), contact your MovinCool reseller.

OPERATION (cont.)

Set Clock

Prior to operating the Office Pro W20 users should set the clock of the controller to the correct time as shown in the following steps:

1. Press and hold the SET CLOCK button for 3 seconds or until beep. (LCD indicates blinking “CLOCK” and blinking “day of the week”.)
2. Press SET TEMP buttons to scroll day of the week.
3. Press ENTER button.
4. Press SET TEMP buttons to select correct hour.
5. Press ENTER button.
6. Press SET TEMP buttons to select correct minute. Press SET CLOCK button to exit clock mode.



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Note: User should check clock periodically to confirm clock accuracy.

Operating in COOL Mode

1. The unit can be operated in COOL mode by pressing the COOL ON/OFF button (LCD indicates “COOL ON”).

   Note: In COOL mode the unit can only be turned off by pressing the COOL ON/OFF button.
2. Change the fan speed by pressing the FAN HI/LO button.
3. Change the temperature set point by pressing the SET TEMP buttons (△/▽).

   Note: When turning the unit on, the set point and fan speed are determined by the last operating mode. (This function does not apply to PROGRAM mode.)

OPERATION (cont.)

Operating in FAN ONLY Mode

1. The unit can also be operated in FAN ONLY mode by pressing FAN HI/LO button (LCD indicates “FAN HI/LO” and “COOL OFF”).
2. The unit can then be turned off by pressing the FAN HI/LO button until fan turns off (FAN ONLY mode speed sequences are HI→LO→OFF).

Changing from FAN ONLY Mode to COOL Mode

The COOL mode can be activated while the unit is operating in FAN ONLY mode. To do this, simply press the COOL ON/OFF button (LCD indicates “COOL ON”).

Note: The FAN ONLY mode does not operate after the COOL mode has been activated. The unit can only be turned off by pressing the COOL ON/OFF button.

Keypad Lock

Keypad lock disables all buttons on the controller panel except keypad lock and unlock operations.

1. To lock, press and hold ENTER and SET CLOCK buttons simultaneously for 5 seconds.
2. To unlock, press and hold ENTER and SET CLOCK buttons simultaneously for 5 seconds again.

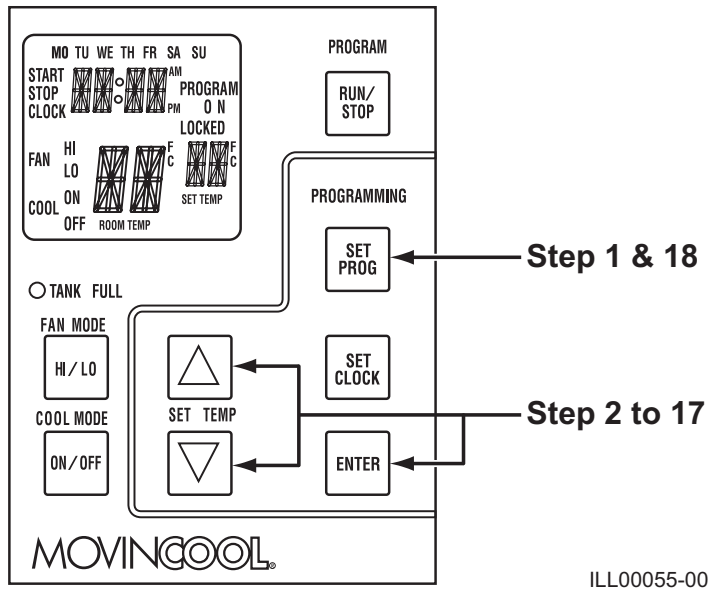
Note: When the unit detects operation failure, keypad is unlocked automatically and self-diagnostic code illuminates.

OPERATION (cont.)

How to Set a Program

SET START TIME

1. Press and hold the SET PROG button for 3 seconds or until beep.
2. Press SET TEMP buttons to scroll day of the week.
3. Press ENTER button.
4. Press SET TEMP buttons to select desired hour.
5. Press ENTER button.
6. Press SET TEMP buttons to select desired minute.
7. Press ENTER button.



ILL00055-00

SET STOP TIME

8. Press SET TEMP buttons to scroll day of the week.
9. Press ENTER button.
10. Press SET TEMP buttons to select desired hour.
11. Press ENTER button.
12. Press SET TEMP buttons to select desired minute.
13. Press ENTER button.

SET FAN SPEED

14. Press SET TEMP buttons to select desired fan speed.
15. Press ENTER button.

SET SET-POINT TEMPERATURE

16. Press SET TEMP buttons to select desired temperature.
17. Press ENTER button.

EXIT PROGRAM EDITING MODE

18. Press SET PROG button to exit program editing mode.

EDIT MULTIPLE PROGRAMS

19. Repeat step 1. to 18. to set up multiple programs.

Note: Maximum 7 programming sequences

OPERATION (cont.)

How to View and Delete Program

1. Press and hold the SET PROG button for 3 seconds or until beep.
2. To view edited program - While pressing and holding the SET PROG button, press SET TEMP buttons (△/▽) to scroll program sequence.
3. To delete a program - Press ENTER and SET PROG buttons once simultaneously.
4. To delete multiple program - Press and hold ENTER and SET PROG buttons simultaneously.

How to Run and Stop Program

1. Press RUN/STOP button to activate preset program (LCD indicates “PROGRAM ON”). During PROGRAM RUN mode, if you RESET (press FAN HI/LO and COOL ON/OFF buttons simultaneously for 5 seconds), PROGRAM RUN mode is terminated. To resume PROGRAM RUN mode, you must push RUN/STOP button again.
2. Press RUN/STOP button to stop program.

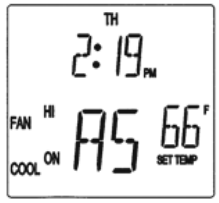
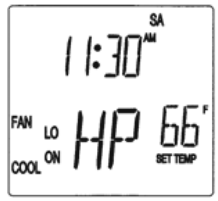
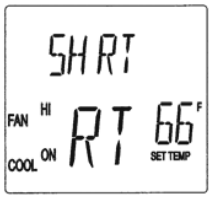
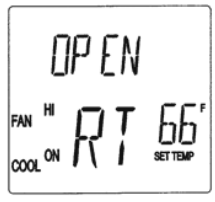
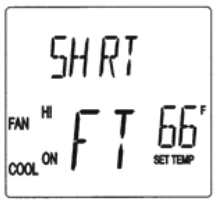
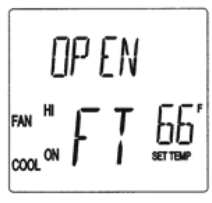
Note:

1. *The unit returns to the previous mode if a program is turned off while it is running.*
2. *The LCD continues to indicate “PROGRAM ON” during program activating.*
3. *Program can be set during power on standby, during unit running, or during program running.*
4. *During programming, the unit returns to the previous mode if no activity occurs within approximately 3 minutes.*

OPERATION (cont.)

Self-Diagnostic Codes

Self-diagnostic codes are displayed on the control board under the following conditions. Contact your MovinCool reseller or a qualified technician if problem persists.

LCD Display Codes	Condition
	When the drain tank switch shuts off the unit, LCD displays “TANK FL” and “TANK FULL” LED flashes. Once emptying the drain tank procedure is completed and ON/OFF has been pushed, unit returns to normal operation.
	When the condensate pump stops pumping water due to any kink and/or blockage in the drain line or due to improper routing of the drain line, the compressor shuts off, and the LCD displays “AS”. Once the condition is fixed and unit has been RESET, the unit returns to normal operation. To RESET: Press FAN HI/LO and COOL ON/OFF buttons simultaneously for 5 seconds, controller returns to normal operation.
	When high pressure switch is activated for the first 2 times in 24 hours, display shows “HP” but goes away as the high pressure switch resets. If the high pressure switch is activated 3 times in 24 hours, unit displays blinking “HP” and a buzzer turns on (see page 34). Unit returns to normal operation after problem is fixed and controller is RESET. To RESET: Press FAN HI/LO and COOL ON/OFF buttons simultaneously for 5 seconds, controller returns to normal operation.
 	When room thermistor becomes open or shorted, display shows “OPEN RT” or “SHRT RT” and cool mode operation is off. Display and cool mode operation are returned to normal operation after room thermistor is fixed.
 	When freeze thermistor becomes open or shorted, display shows “OPEN FT” or “SHRT FT” and cool mode operation is off. Display and cool mode operation are returned to normal operation after freeze thermistor is fixed.

OPERATION (cont.)

Empty the Drain Tank

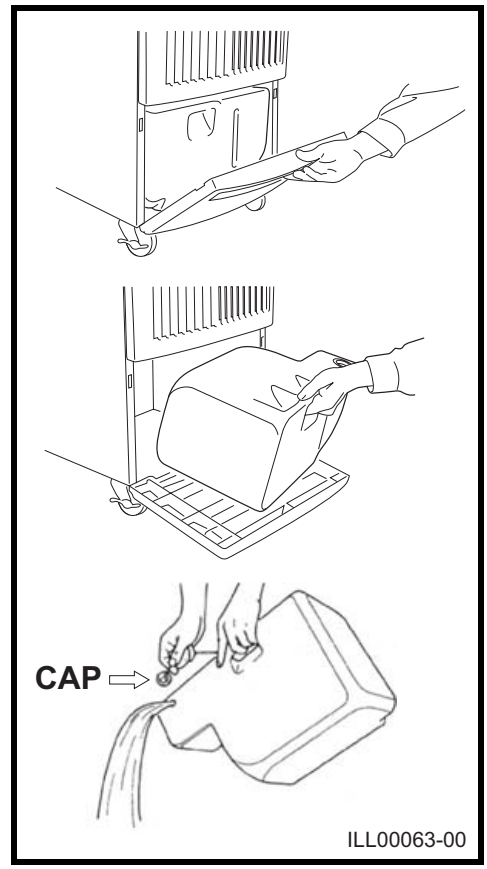
During COOL mode, condensate water accumulates in the drain tank. When the drain tank becomes full, the “TANK FULL” LED flashes and the LCD displays “TANK FL” and the unit turns off automatically.

Note: If you want to empty the drain tank, while the unit is in operation, press the COOL ON/OFF button to turn the unit off. If a program is running, you must first stop the program by pressing the RUN/STOP button.

1. Open the drain tank door.

2. Pull the drain tank from the unit.

3. Remove the cap and empty the drain tank.



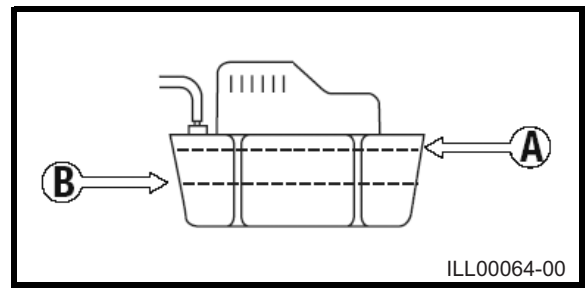
4. Replace the cap and return the drain tank to the unit.
5. Close the drain tank door.
6. Press the COOL ON/OFF or FAN ON/OFF button to restart the unit.
7. If the LCD indicates “PROGRAM ON”, press the COOL ON/OFF button to continue running the program. If the LCD indicates “PROGRAM ON” is illuminated continuously, no further steps are necessary. If no program exists or the program was deactivated, press the COOL ON/OFF button to restart the unit.

OPERATION (cont.)

Condensate Pump Kit (Optional)

A condensate pump kits are available to allow continuous operation and to eliminate the need for a drain tank.

When the water collects to level (A) in the pump reservoir, the condensate pump begins to operate and discharge the water.

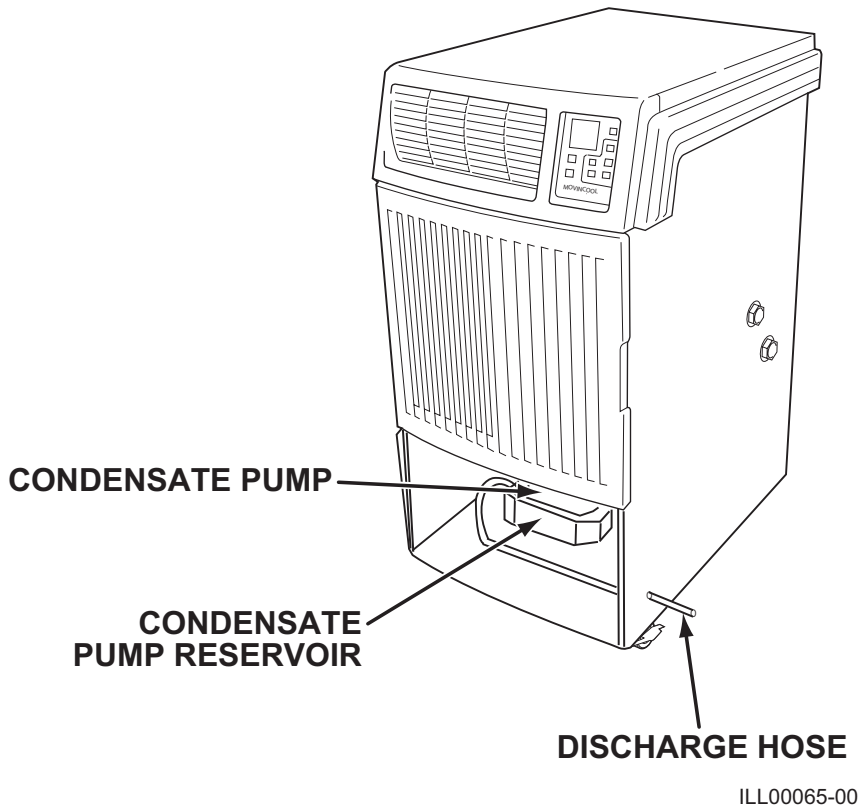


Note: The compressor does not operate while the condensate pump is discharging the water.

When the water level drops below level (B), the condensate pump stops, and the compressor restarts.

Note: If for any reason the water level exceeds that of level (A) in the pump reservoir, an over flow drain switch stops the compressor operation, and the LCD displays "AS" (see page 25).

Note: If the fan mode control DIP switch (see page 20) is set to the STOP position, the entire unit (including fan operation) turns off either due to the over flow drain switch or while the condensate pump is discharging the water.



INSPECTION & MAINTENANCE

Empty the Drain Tank

To empty the drain tank, refer to instructions on page 26.

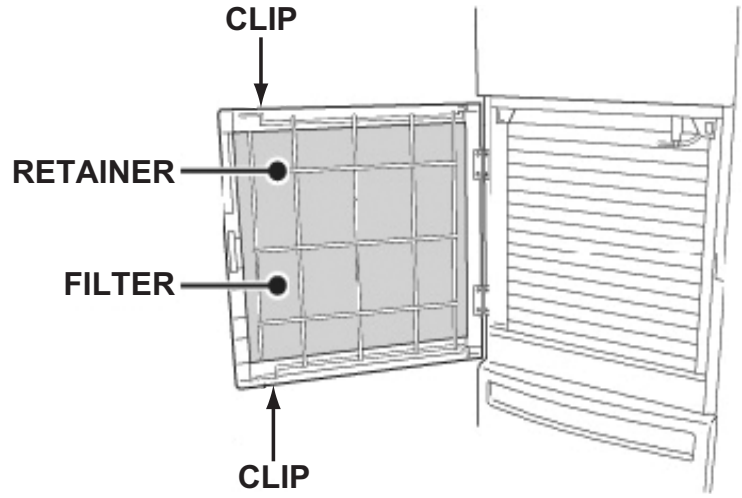
Clean the Air Filter

Clean the air filter once a week. If the unit is used in a dusty environment, more frequent cleaning may be required. A dirty air filter can reduce air output resulting in a decrease in the cooling capacity.

Filter Removal Method

1. Turn the unit off by pressing the COOL ON/OFF button.
   If a program is running, you must first press the PROGRAM RUN button.
2. Remove the air filter.

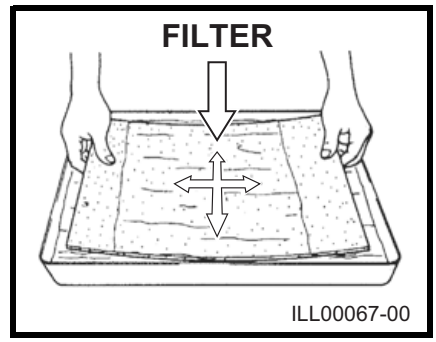
   Note: To remove the filter from the unit, open the front panel filter door. On the front panel door, carefully remove the filter retainer from its clips by pulling on the retainer at those two points.



ILL00066-00

Filter Cleaning Method

1. Remove dust from the element with a vacuum cleaner, or rinse in cold or lukewarm water. If the element is extremely dirty, wash with a neutral detergent.
2. After the element has been cleaned, rinse with clean running water, allow to dry, then reinstall.

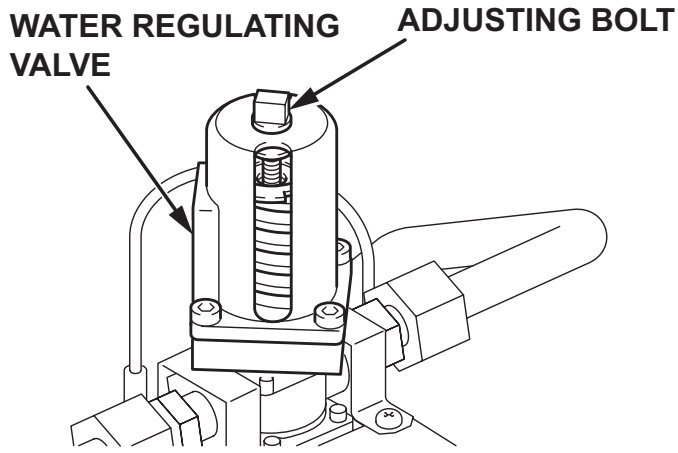


ILL00067-00

INSPECTION & MAINTENANCE (cont.)

Water Regulating Valve

This unit has a water regulating valve to operate within wide water temperature range. This water regulating valve automatically controls the water flow rate to stabilize the refrigeration system, and it has an adjusting bolt to adjust the valve opening temperature.



ILL00205-00

Default Valve Setting and Operation Range

Default setting of the valve opening temperature is 86 °F (30 °C) and marked on the valve housing. If the entering water temperature is below 86 °F (30 °C), there is no loss of water while the unit is not operating. Adjustment of the valve setting is required only when the unit will be used under the following conditions.

Entering water temperature is below 68 °F (20 °C):
Valve setting must be adjusted to lower temperature to extend the life of the compressor.

Entering water temperature is above 86 °F (30 °C):
Valve setting must be adjusted to higher temperature to prevent wasted water.

Note: This adjustment expands the minimum water temperature range. Carefully control the operating range.

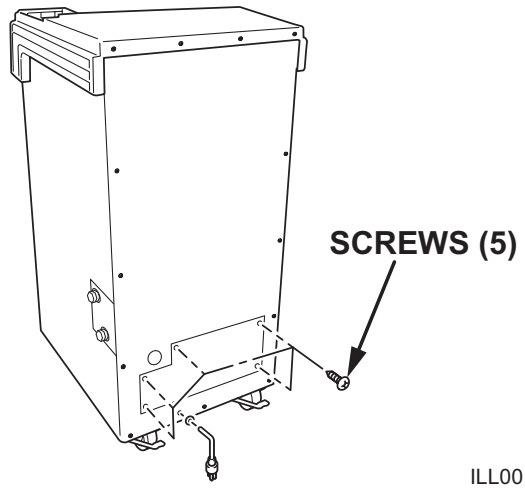
⚠ **CAUTION: Failure to adjust the water regulating valve or operating the unit with entering water temperature below 68 °F (20 °C) without adjusting the valve setting may damage the unit and void the warranty. Contact a qualified technician for details.**

INSPECTION & MAINTENANCE (cont.)

Water Regulating Valve (cont.)

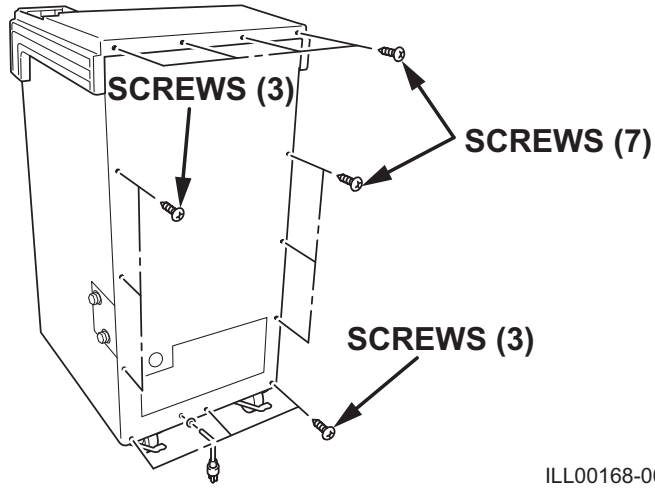
Adjustment of Water Regulating Valve Setting

1. Stop the unit and unplug the power cord. Then shut off the water supply.
2. Remove five (5) screws from the service panel on the rear side of the unit.



ILL00156-00

3. Remove thirteen (13) screws from the rear panel.



ILL00168-00

4. Check the valve setting guide table on the inside panel of the unit to confirm the current valve setting. If the table is blank, it is the first time adjustment. If it is not the first time adjustment, the current setting must be changed back to the default setting prior to make any adjustment.

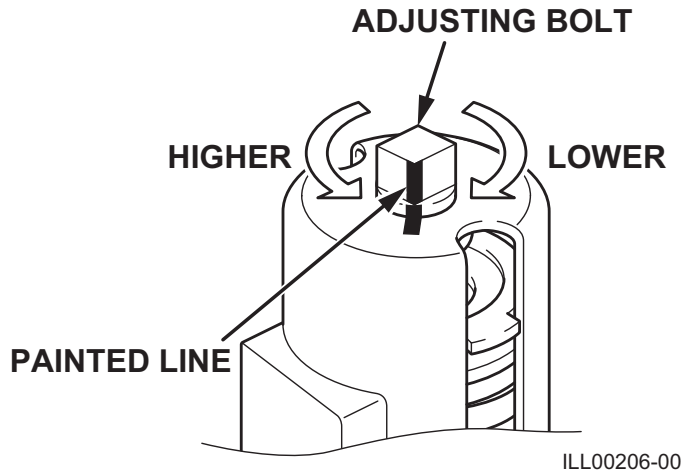
INSPECTION & MAINTENANCE (cont.)

Water Regulating Valve (cont.)

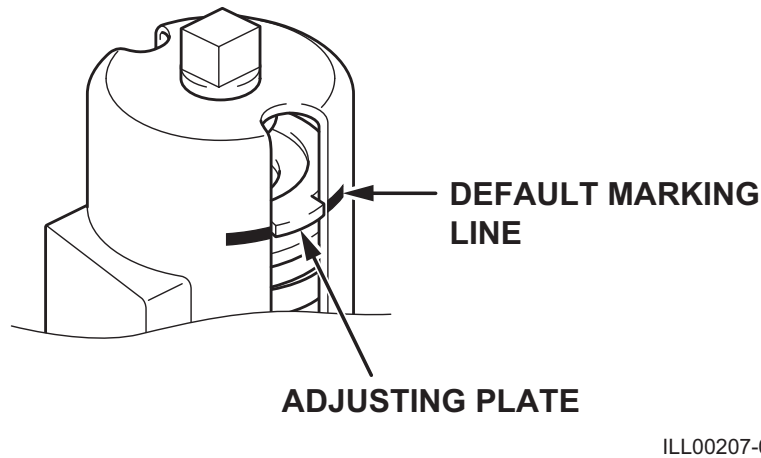
Adjustment of Water Regulating Valve Setting (cont.)

5. Rotate the adjusting bolt with a wrench to adjust the valve temperature setting according to the “Valve Setting Guide Table” on page 32. The painted line on adjusting bolt and housing is for rotational reference to complete one rotation (360°).

DIRECTION OF ROTATION	TEMPERATURE SETTING
Clockwise	Lower
Counterclockwise	Higher



Note: The default marking line on the housing is for adjustment reference. The painted line on adjusting bolt and housing is for rotational reference. Each completed rotation of the adjusting bolt is resulting in about 0.04 inch (1 mm) displacement of the adjusting plate.



INSPECTION & MAINTENANCE (cont.)

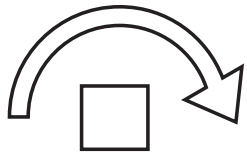
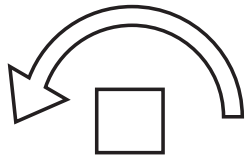
Water Regulating Valve (cont.)

Adjustment of Water Regulating Valve Setting (cont.)

6. Write the value setting on the adjustment record table on the inside panel of the unit.

Note: Recording the value setting is very important for reference when making future adjustments.

Valve Setting Guide Table

SETTING	DIRECTION OF VALVE ROTATION	NUMBER OF ROTATION	VALVE OPENING TEMPERATURE	MINIMUM WATER TEMPERATURE
A	Clockwise 	4	72 °F (22 °C)	40 °F (4.4 °C)
B		3	75 °F (24 °C)	47 °F (8 °C)
C		2	79 °F (26 °C)	54 °F (12 °C)
D		1	82 °F (28 °C)	61 °F (16 °C)
E	Default Setting Point	-	86 °F (30 °C)	68 °F (20 °C)
F	Counterclockwise 	1	90 °F (32 °C)	72 °F (22 °C)
G		2	94 °F (34 °C)	75 °F (24 °C)
H		3	96 °F (36 °C)	79 °F (26 °C)
I		4	100 °F (38 °C)	83 °F (28 °C)

Adjustment Record (Example)

NO.	SETTING DATE	SETTING	NO.	SETTING DATE	SETTING
0	-	E	11		
•	Dec. 10, 2010	B	•		
•	Apr. 10, 2011	D	•		
•	Aug. 10, 2011	G	•		
10			21		

⚠ **CAUTION: Do not forget to write down the value setting on the adjustment record table. This is the only way to know the current valve setting. It is very difficult to exactly adjust the valve without the current valve setting. Failure to adjust the valve may damage the unit and void the warranty. Contact a qualified technician for details.**

INSPECTION & MAINTENANCE (cont.)

In-Season/Off-Season Inspection & Maintenance

In-Season

⚠ **WARNING: To prevent an accident due to electrical shock, perform inspection and maintenance only after unplugging the power cord.**

1. Check the prongs and surface of the power cord plug for dust and/or dirt. If dust and/or dirt are present, wipe off with a clean dry cloth.
2. Check the power cord, plug and prongs for damage or excess play. If any damage or excess play is found, contact your MovinCool reseller or a qualified technician for repair.
3. Check the air filter and drain tank.
4. Check and make sure that there is no damage or leakage at the water line connector.
5. Clean the outside of the unit with a damp cloth or mild nonabrasive cleaner.

Off-Season

1. Operate the unit in FAN ONLY mode for 8 hours prior to storage.
   Note: Operation is necessary to dry out the inside of the unit.
2. Disconnect the power cord from the AC outlet.
3. Shut the water supply and return valve, then disconnect the water line. Use a pan to catch the remaining water. Put the caps on the NPT connectors when the unit is stored during off-season.
4. Check the prongs and surface of the power cord plug for dust and/or dirt. If dust and/or dirt are present, wipe off with a clean dry cloth.
5. Check the power cord, plug and prongs for damage or excess play. If any damage or excess play is found, contact your MovinCool reseller or a qualified technician for repair.
6. Clean the air filter.
7. Empty all water from the drain tank.

TROUBLESHOOTING

Check the following conditions before calling your MovinCool reseller or a qualified technician. If conditions persist after the following actions have been taken, turn the unit off, disconnect the power and contact your MovinCool reseller or a qualified technician.

CONDITION	POSSIBLE CAUSE	REMEDY
Unit does not operate.	1. Ground fault breaker trip or LCDI power cord trip.	Reset breaker or reset power cord.
	2. Drain tank is full. ("TANK FULL" LED flashes.)	Empty the drain tank.
	3. High pressure switch activated 10 times in 24 hours.	1. Check environmental condition whether it is within operation range or not. 2. Connect water inlet of the unit and water supply line properly. 3. Check water line, and make sure there is enough water flow. 4. Clean water system to remove accumulated sediments. Contact a qualified technician for details. 5. Reset controller. To RESET: Press FAN HI/LO and COOL ON/OFF buttons simultaneously for 5 seconds, controller returns to normal operation.
Insufficient cooling.	1. Dirty/Blocked air filter.	Clean air filter.
	2. Air inlet/outlet blocked.	Clean air inlet/outlet.
	3. Improper temperature setting.	Adjust temperature setting.
	4. Insufficient water flow. Sediments are accumulated in the water system.	Clean water system. Contact a qualified technician for details.
Water keeps running when the unit is not operating.	Entering water temperature is above 86 °F (30 °C).	Stop the unit and shut off supplied water. Adjust the unit's water regulating valve setting (see page 29). Contact a qualified technician for details.

TECHNICAL SPECIFICATIONS

ITEM			SPECIFICATIONS
Electronic Features	Operation		Digital Programmable
Electrical Characteristics	Voltage Requirement		Single-Phase, 115 V, 60 Hz
	Operating Voltage Range	Max.	127 V
		Min.	104 V
	Recommended Fuse Size		15 A
Cooling Capacity and Power Consumption			
Air: 80 °F (27 °C), 50 %RH Water (EWT/LWT): 85 °F /95 °F (29 °C/35 °C)	Total Cooling Capacity		15,700 Btu/h (4,590 W)
	Sensible Cooling Capacity		10,800 Btu/h (3,180 W)
	Power Consumption		1.28 kW
	Current Consumption		11.7 A
	EER		12.3
Compressor	Type of Compressor		Hermetic Rotary
Evaporator	Type of Fan		Centrifugal Fan
	Air Flow	High	565 CFM (960 m^3/h)
		Low	540 CFM (918 m^3/h)
	Max. External Static Pressure		0.31 IWG (77 Pa)
Condenser	Type		Water Cooled, Coaxial Coil
Refrigerant	Type		R-410A
	Amount		1.76 lb (0.8 kg)
Water Connection	Water Inlet and Outlet (Unit side)		1/2 in (13 mm) NPT Female
	Water Inlet and Outlet Adapters		GHT Female to 1/2 in (13 mm) NPT Male
Power Cord	NEMA Plug Configuration		5-15
	Gauge x Length		14 AWG (3-core) x 10 ft (3.0 m)
Dimension	W x D x H		21.0 x 27.0 x 41.5 in (538 x 685 x 1,055 mm)
Weight	Net		178 lb (81 kg)
Drain Tank Capacity			5.0 gal (19 L)
Operating Condition Range	Inlet Air Temperature	Max.	95 °F (35 °C), 60 %RH
		Min.	65 °F (18 °C), 50 %RH
	Entering Water Temperature*1	Max.	90 °F (32 °C)
		Min.	40 °F (4.4 °C)
	Water Pressure		150 psi (1,034 kPa) or less
	Recommended Water Flow Rate		4.8 gal/min (18 L/min)

TECHNICAL SPECIFICATIONS (cont.)

ITEM		SPECIFICATIONS
Maximum Duct Length	Cold Duct	25 ft (7.6 m)
Sound Level*2	High	62 dB (A)
	Low	60 dB (A)

- Specifications are subject to change without notice.

Note:

**1: If the entering water temperature is below 68 °F (20 °C) or above 86 °F (30 °C), adjustment of the unit's water regulating valve setting is required.*

**2: Measured at 3 feet (1.0 m) from surface of the unit.*

MOVINCOOL®
THE #1 SPOT COOLING SOLUTION

LIMITED WARRANTY

DENSO SALES CALIFORNIA, INC. ("DENSO") warrants its MOVINCOOL Products only to the extent stated in its official written warranties. Unless otherwise specifically provided in writing by DENSO, DENSO warrants to end-user that the Products shall be free of defects in materials or workmanship and will function in accordance with DENSO's published specifications under ordinary intended use and service for a period of twelve (12) months from the date of purchase on the invoice to the end-user, provided, however in the case of the compressor element of the Products such warranty shall be for a period of thirty six (36) months from the date of purchase on the invoice to the end-user. DENSO shall, at its sole option, repair or replace any defective Product covered by this warranty. Such remedy shall be end-user's sole remedy with respect to any particular defect in the Products.

This warranty does not cover defects or malfunctions which result from causes beyond DENSO's control, including, without limitation, (i) unusual physical or electrical stress; (ii) accident, neglect, abuse, misuse or other abnormal use; (iii) failure to perform routine maintenance in accordance with DENSO's recommended procedures; (iv) normal wear and tear; (v) repairs or attempted repairs by an unauthorized person; (vi) modifications or alterations to the Products; (vii) use with parts or devices not supplied or approved by DENSO; (viii) improper installation or service. (ix) shipping damage. This includes and is not limited to compressors, evaporators and condenser coils. This warranty shall extend only to the original end-user and shall be void if any labels or other identifying marks permanently affixed to Products when shipped by DENSO are removed, altered, defaced or obliterated.

TO THE EXTENT PERMITTED BY LAW, THIS WARRANTY, AS LIMITED HEREIN, SHALL BE IN LIEU OF AND EXCLUSIVE OF ALL OTHER WARRANTIES, EITHER EXPRESSED OR IMPLIED, ON THE PART OF DENSO SALES CALIFORNIA, INC., OR DENSO CORPORATION, WHETHER ARISING FROM LAW, COURSE OF DEALING, USAGE OF TRADE, OR OTHERWISE, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTY OF MERCHANT-ABILITY OR FITNESS OF A PARTICULAR PURPOSE OR ANY LIABILITY FOR COMMERCIAL LOSSES BASED UPON NEGLIGENCE OR MANUFACTURER'S STRICT LIABILITY. EXCEPT AS EXPRESSLY PROVIDED HEREIN, NEITHER DENSO SALES CALIFORNIA, INC., NOR DENSO CORPORATION WILL, IN ANY EVENT, BE LIABLE FOR LOST PROFITS, COSTS OF PROCESSING, INJURY, GOODWILL, OR ANY OTHER CONSEQUENTIAL DAMAGES OF ANY KIND ARISING FROM BREACH OF THIS WARRANTY.

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PURCHASE DATE: _____

SERIAL NUMBER: _____

DENSO

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www.movincool.com

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